

REMARKS

Claims 1-14 are pending in this application. Claim 2 has been canceled without prejudice, claims 1, 3, 5-8, and 11-14 have been amended, and claims 15-19 have been added by the present Amendment. Amended claims 1, 3, 5-8, and 11-14 and new claims 15-19 do not add new matter.

CLAIM OBJECTION

The Examiner objects to claim 7 for the reasons given on page 2 of the office action. Applicants have amended claim 7 as suggested by the Examiner, and respectfully request that the Examiner withdraw the objection to claim 7.

REJECTIONS UNDER 35 U.S.C. § 112

Reconsideration is respectfully requested of the rejections of claims 3-12 under 35 U.S.C. § 112 as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicants have amended claim 8 to recite "first scanning direction" and "second scanning direction", and have deleted reference to first and second directions in claim 11. Accordingly, Applicants submit that claims 8 and 11 are definite.

Regarding the remaining section 112 rejections of independent claims 3 and 11, Applicants have amended claims 3 and 11 to remove the disputed portions and/or to clarify the claim language so that it is definite. Accordingly, Applicants submit that claims 3 and 11 are definite.

As such, Applicants respectfully submit that the Examiner withdraw the rejection of claims 3-12 under 35 U.S.C. § 112.

REJECTIONS UNDER 35 U.S.C. §§ 102 and 103

Reconsideration is respectfully requested of the rejection of (1) claims 8, 9 and 13 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,392,620 ("Mizutani"); (2) claim 10 under 35 U.S.C. § 103(a) as being unpatentable over Mizutani; (3) claims 1, 6, 7, 12 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Mizutani in view of U.S. Patent No. 5,233,338 ("Surguy"); and (4) claim 2 under 35 U.S.C. § 103(a) as being unpatentable over Mizutani in view of Surguy as applied to claim 1, and further in view of U.S. Patent No. 6,947,034 ("Kwon").

Claim 1 and Claims Dependent Thereon

Claim 1 recites, *inter alia*, that the gate driver applies gate-on voltages to all pixels of the liquid crystal panel assembly during a time between frames, and then the black data signal is applied to all pixels.

At the very least, Applicants respectfully submit that the cited references do not disclose or suggest the above features of claim 1.

In contrast to the claimed embodiment, in Mizutani normal data is applied during a part of a frame, and black data is applied during the other part of the frame. Also, Surguy and Kwon do not cure the deficiencies in Mizutani.

Further, Kwon relates to improving display quality by way of making a period of displaying black on a pixel and a period of displaying color on the pixel the same. However, the claimed embodiments improve display quality by making an average period between two adjacent frames of displaying black on a pixel and an average period between two adjacent frames of displaying color on the pixel the same when the two adjacent frames have opposite scanning directions from each other. In this regard,

Kwon and the present application teach different solutions for improving display quality.

Accordingly, for at least these reasons, claim 1 is patentable over Mizutani in view of Surguy, and further in view of Kwon.

For at least the reason that claims 13 and 14 depend from claim 1, claims 13 and 14 are also submitted to be patentable over the cited references.

Claim 3 and Claims Dependent Thereon

Claim 3 recites, *inter alia*, that between a period of applying the gate-on voltage to the last gate line of a first scanning area and a period of applying the gate-on voltage to the first gate line of a second scanning area which is next to the first scanning area, a gate-on voltage is applied to all gate lines except gate lines included in the first and second areas, and then the black data signal is applied to the pixels except pixels included in the first and second areas.

At the very least, Applicants respectfully submit that the cited references do not disclose or suggest the above features of claim 3.

In contrast to the claimed embodiment, in Mizutani normal data is applied during a part of a frame, and black data is applied during the other part of the frame. Also, Surguy and Kwon do not cure the deficiencies in Mizutani.

Accordingly, for at least these reasons, claim 3 is patentable over Mizutani in view of Surguy, and further in view of Kwon.

For at least the reason that claims 4-7 depend from claim 3, claim 4-7 are also submitted to be patentable over the cited references.

Claim 8 and Claims Dependent Thereon

Claim 8 recites, *inter alia*, applying gate-on voltages to all pixels during a time

between frames, and then the black data voltage is applied to all pixels.

At the very least, Applicants respectfully submit that the cited references do not disclose or suggest the above features of claim 8.

In contrast to the claimed embodiment, in Mizutani normal data is applied during a part of a frame, and black data is applied during the other part of the frame. Also, Surguy and Kwon do not cure the deficiencies in Mizutani.

Accordingly, for at least these reasons, claim 8 is patentable over Mizutani in view of Surguy, and further in view of Kwon.

For at least the reason that claims 9, 10 and 12 depend from claim 8, claims 9, 10 and 12 are also submitted to be patentable over the cited references.

Claim 11 and Claims Dependent Thereon

Claim 11 recites, *inter alia*, a third data voltage application step applying a black data voltage to the first area between a period of applying normal data voltages to the (N-1)th area and a period of applying normal data voltages to the Nth area.

At the very least, Applicants respectfully submit that the cited references do not disclose or suggest the above features of claim 11.

In contrast to the claimed embodiment, in Mizutani normal data is applied during a part of a frame, and black data is applied during the other part of the frame. Also, Surguy and Kwon do not cure the deficiencies in Mizutani.

Accordingly, for at least these reasons, claim 11 is patentable over Mizutani in view of Surguy, and further in view of Kwon.

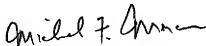
Accordingly, Applicants respectfully request that the Examiner withdraw the rejections of claims 1-14 under 35 U.S.C. §§ 102 and 103.

NEW CLAIMS

Applicants submit new claims 15-19 for the Examiner's consideration.

An early and favorable reconsideration is earnestly solicited. If the Examiner has any further questions or comments, the Examiner may telephone Applicants' Attorney to reach a prompt disposition of this application.

Respectfully submitted,



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